General Biology

HYPOGLYCEMIC EFFECT OF EXTRACT *Costus specious*

Camille Stackhouse, Jorge Castillo, and Floyd Banks*

Chicago State University
9501 S. King Drive
Chicago Illinois 60628
E- Mail: camillestackhouse@yahoo.com

Diabetes Mellitus is a major health concern in western society. Diabetes contributes to the genesis of many debilitating diseases. As such, amelioration of the symptoms is a major concern of health practitioners. On the Caribbean Island of Puerto Rico, in order to control the pathology, diabetics drink a tea made from the plant *Costus specious*. In order to test the efficiency of blood glucose maintenance, we tested the tea using a diabetic rat model. Harlan Spraque Dawley rats were injected with the antibiotic streptozotocin become diabetic. Streptozotocin selectively destroys the pancreatic ß cells, making the rat diabetic. Blood glucose levels were monitored before and after administration of the antibiotic. Diabetic rats with blood glucose levels ranging 250-400 mg/dl of blood were orally administered tea made from *Costus specious*. Extracts of the tea were obtained by cold condensation techniques and injected into the rat via intraperitoneal injection. Within twenty-four hours of the initial administration blood glucose levels begin to return to normal ranges of 70-120 mg/dl of blood. When the rat blood glucose levels did not exceed 380 mg/dl, tea extracts lowered the blood levels significantly. If the blood glucose levels exceeded 380 mg/dl the extract was not effective.